# AGACNP Student Led Interdisciplinary Teams: An IPE Approach to TeamSTEPPS in the Simulation Learning Center

Bethany Cieslowski, DNP, MA, CHSE

Sarah Craig, PhD, RN, CCNS, CCRN-K, CHSE

Mary Deivert, DNP, AGACNP

Ryne Ackard, MSN, CHSE, CHSOS

Kathryn Reid, PhD, RN, FNP-C

UNIVERSITY of VIRGINIA

# Disclosure

- Conflict of Interest
- The authors have no conflicts of interest to disclose
- University of Virginia

Authors:

Bethany Cieslowski, DNP, MA, CHSE,

Sarah Craig, PhD, RN, CCNS, CCRN-K, CHSE,

Mary Deivert, DNP, AGACNP,

Ryne Ackard, MSN, CHSE, CHSOS,

Kathryn Reid, PhD, RN, FNP-C

# Objectives

- Describe the five pillars of the TeamSTEPPS framework.

- Discuss innovative strategies and lessons learned from integrating collaborative teamwork and leadership simulations into the undergraduate and graduate curriculum.

- Apply concepts described to integrate teamwork/leadership simulation-based interventions to validate student performance.

# TeamSTEPPS - Background

- TeamSTEPPS is an evidence-based framework developed by the U.S. Department of Defense

- Used to train high functioning multidisciplinary teams on team structure focusing on communication, leadership, situational monitoring and mutual support (AHA, 2018).

- Key Principles – Team Structure, Communication, Leadership, Situation Monitoring, Mutual Support

# Methods

- Coordinated schedules and objectives

- Developed two interprofessional leadership and teamwork simulation scenarios (pre training and post training )
  - Second year AGACNP (n=31) = leaders
  - 4th year undergrads (n=83) = "followers"

- TeamSTEPPS training for AGACNPs

- Leader evaluated using TMPOT – observation checklist

- Learning experiences measured using Post Simulation Evaluation (eight question using 5-point Likert scale)

# Timeline

- January 17 & 24: Pre-Training simulation (TMPOT and Post Simulation Evaluations collected)

- February 7: TeamSTEPPS Training for AGACNPs

- February 21th & 28: Post-Training simulation (TMPOT and Post Simulation Evaluations collected)

# Simulation: Pre-Training Simulation

- Cardiac Arrest Algorithm: Pulseless V-tach

- Interprofessional: RT judging patient and interruptions in code

Objective (AGACNP)

- Learn and execute principles of complex problem solving, decision making, leadership and teamwork during clinical care as an AG-ACNP

Objectives (4th Year & AGACNP)

  - Demonstrate effective leadership and teamwork

  - Assess the patient

  - Prioritize appropriate interventions

# TeamSTEPPS Training

Objectives:

- Provide AGACNP students the tools for leadership essentials using the TeamSTEPPS framework

- Create a leadership style

- Apply the evidence-based tools from the TeamSTEPPS framework in an immersive simulated environment to strengthen knowledge of teamwork and leadership

# Simulation: Post-Training Simulation

- Cardiac Arrest Algorithm: Ventricular Fibrillation

- Interprofessional: RT intubates to enable continuous compressions

Objective (AGACNP)

- Learn and execute principles of complex problem solving, decision making, leadership and teamwork during clinical care as an AG-ACNP

Objectives (4th Year & AGACNP)

  - Demonstrate effective leadership and teamwork

  - Assess the patient

  - Prioritize appropriate interventions

# Evaluation of Simulation Experience

| Item | Score 1-5 (Strongly Disagree to Strongly Agree) |
|---|---|
| 1. The teaching methods used in this simulation were helpful and effective. | |
| 2. This simulation provided me with a variety of activities to promote my learning. | |
| 3. The teaching materials used in this simulation were motivating and helped me to learn. | |
| 4. I was encouraged to acknowledge the successes and strengths of my peers and myself. | |
| 5. I was encouraged to look for areas for improvement in a supportive way. | |
| 6. I was encouraged to actively participate in the debriefing process. | |
| 7. I had the opportunity to learn from my peers and faculty in a collaborative, supportive way. | |
| 8. This simulation activity addressed an important topic for my learning. | |
| Comments: | |

# Results: AGACNP Evaluations

| Assessment Items | Pre- training (N=31) | | Post- training (N=32) | | |
|---|---|---|---|---|---|
| | Range | Mean (SD) | Range | Mean (SD) | |
| The teaching methods used in this simulation were helpful and effective. | 4 - 5 | 4.94 (0.25) | 1 - 5 | 4.38 (1.21) | |
| This simulation provided me with a variety of activities to promote my learning. | 4 - 5 | 4.81 (0.40) | 1 - 5 | 4.38 (1.18) | |
| The teaching materials used in this simulation were motivating and helped me to learn. | 4 - 5 | 4.81 (0.40) | 1 - 5 | 4.50 (1.02) | |
| I was encouraged to acknowledge the successes and strengths of my peers and myself. | 4 - 5 | 4.90 (0.30) | 1 - 5 | 4.66 (1.00) | |
| I was encouraged to look for areas for improvement in a supportive way. | 4 - 5 | 4.84 (0.37) | 1 - 5 | 4.66 (1.00) | |
| I was encouraged to actively participate in the debriefing process. | 4 - 5 | 4.84 (0.37) | 1 - 5 | 4.69 (1.00) | |
| I had the opportunity to learn from my peers and faculty in a collaborative, supportive way. | 4 - 5 | 4.87 (0.34) | 1 - 5 | 4.62 (1.01) | |
| This simulation activity addressed an important topic for my learning. | 4 - 5 | 4.81 (0.40) | 1 - 5 | 4.66 (1.00) | |
| Total evaluation score | 32 - 40 | 38.81 (1.90) | 8 - 40 | 36.53 (7.98) | |

# Results: 4<sup>th</sup> Year Evaluations

| Assessment Items | Pre- training (N=123) | | Post- training (N=126) | |
|---|---|---|---|---|
| | Range | Mean (SD) | Range | Mean (SD) |
| The teaching methods used in this simulation were helpful and effective. | 1 - 5 | 4.67 (0.57) | 1 - 5 | 4.63 (0.59) |
| This simulation provided me with a variety of activities to promote my learning. | 3 - 5 | 4.63 (0.52) | 1 - 5 | 4.59 (0.65) |
| The teaching materials used in this simulation were motivating and helped me to learn. | 4 - 5 | 4.65 (0.48) | 1 - 5 | 4.61 (0.62) |
| I was encouraged to acknowledge the successes and strengths of my peers and myself. | 4 - 5 | 4.77 (0.42) | 1 - 5 | 4.65 (0.58) |
| I was encouraged to look for areas for improvement in a supportive way. | 4 - 5 | 4.72 (0.45) | 1 - 5 | 4.69 (0.57) |
| I was encouraged to actively participate in the debriefing process. | 4 - 5 | 4.76 (0.43) | 1 - 5 | 4.69 (0.56) |
| I had the opportunity to learn from my peers and faculty in a collaborative, supportive way. | 4 - 5 | 4.78 (0.42) | 1 - 5 | 4.66 (0.57) |
| This simulation activity addressed an important topic for my learning. | 4 - 5 | 4.82 (0.38) | 1 - 5 | 4.71 (0.58) |
| Total evaluation score | 31 - 40 | 37.80 (2.86) | 8 - 40 | 37.22 (4.38) |

# Results: 4ᵗʰ Year
# Pre-Training Simulation Evaluation Comments

| | |
|---|---|
| "Great leader, very calm" | "Make sure you are confident in your orders because it instills confidence in us…" |
| "I wouldn't have known the NP student was a student" | "Calm, assertive and confident… the perfect balance" |
| "Confident, assertive... trusted us to do our jobs." | "The NP leader was confident which made me feel confident in my role as well…" |
| "I was confused at the start but the leader did a good job of assigning roles and making sure we know what we were doing" | "Great communication skills and confidence that eases the minds of the people in the room during very stressful situation" |
| "Very calm, communicated well, established roles which helped it run smoothly…" | "Strong leadership, clear delegation, strong communication" |
| "The leader did well but could have been more assertive (with nursing students) at times" | "The leader focused on the big picture, allowing us to be focused on specific tasks. The leader was very respectful of us" |

# Results: AGACNP
# Pre-Training Simulation Evaluation Comments

| | |
|---|---|
| "This was enlightening for me. I saw areas where I need to improve and areas where I am doing alright. I think I would benefit from doing it again" | "Great experience, the nursing students did an awesome job! It was fun being apart of the new generation of nurses!" |
| "Great team experience. Really helpful" | "Very helpful learning environment" |
| "Great sim for learning. I definitely suggest it for the future" | "The debriefing was fantastic! Very professional and focused while allowing room for the team to explore their own thoughts in a constructive way. The only downside was that we only had time for one event. A second day, with an identical schedule would be very helpful" |
| "I enjoyed the opportunity to lead a team of nurses and get to practice my role as a NP leader" | "This was a great opportunity to receive feedback which will certainly influence my future practice" |
| "This was a really good experience with the BSN students" | "Best simulation ever" |
| "It was awesome to be able to led a team during a code. Very informative" | "I really enjoyed this simulation experience. It was my first time running a code and felt challenged, but safe a way to learn" |

# Results: 4th year
## Post-Training Evaluation Comments

| | |
|---|---|
| "Very calm, good situational awareness, prompt feedback" | "Our team leader introduced herself, encouraged communication, and gave directions in a calm and effective way" |
| "He did very well and had a good balance of calm and assertive behavior" | "Calm, controlled, and assertive without raising her voice" |
| "I liked this leadership style; kind and calm but a strong presence and involvement" | "Calm, quiet leadership. Maybe not assertive enough but good" |
| "She was prepared, knew her strengths, encouraged communication, and was calm and acknowledged all the team members and their contributions" | "It makes me feel really confident going forward because I have been corrected in areas where I still needed to learn a lot, in addition to feeling confident in experiences that I wouldn't get on the floor" |
| "Strong leader, great with clear delegation and considerate of team member needs" | "She was calm and organized. She was confident in what to do" |
| "Positive feedback, assertive but not aggressive, calming and reassurance" | "Clear, closed loop communication was good. Like that she tried to learn our names" |
| "Clear, closed loop communication was good. Like that she tried to learn our names" | "Loved her interpersonal skills; used names to address us and willing to helps in our roles" |
| "She was good needs to speak up more" | "Very assertive but in a respectful manner" |

# Results: AGACNP
# Post-Training Evaluation Comments

| | |
|---|---|
| "Really appreciated the critical analysis of scenario in debrief" | "This was great practice" |
| "This was a great group of nurses and our code went well" | "Enjoyed interdisciplinary interaction" |
| "This was an incredible opportunity and I have developed skills I will take with me into my leadership role. I see the value of closed loop communication and setting a calm tone amidst the chaos and stress of a code" | "A great opportunity for feed back on my leadership style. It's always good to grow as a provider" |
| "These are very helpful for me and working with the students is fun and they are engaging" | "We should do this bi weekly through our degree program. Cases can change but the teamwork learned will be invaluable" |
| "Great experience. Really supportive and open environment to learn" | "The simulation was good. It helped me be a better leader when I am naturally an introverted person" |
| "Nerve wracking, but important to experience" | "The 4th years did great, they were vocal and confident. Good communication" |

# Conclusions

- Simulation provides a platform that enables faculty to incorporate innovative teaching strategies

- Using simulation to provide intraprofessional education opportunities enriched the learning experience, enhanced learner outcomes, and better prepared students to participate in clinical teams.

- Clinical faculty collaborated with simulation experts to refine and redesign the NP curriculum to integrate innovative simulation strategies to meet program expectations and enhance the learner experience

- Student feedback and evaluations supported the use of simulation-based education in the development of teamwork and leadership competency